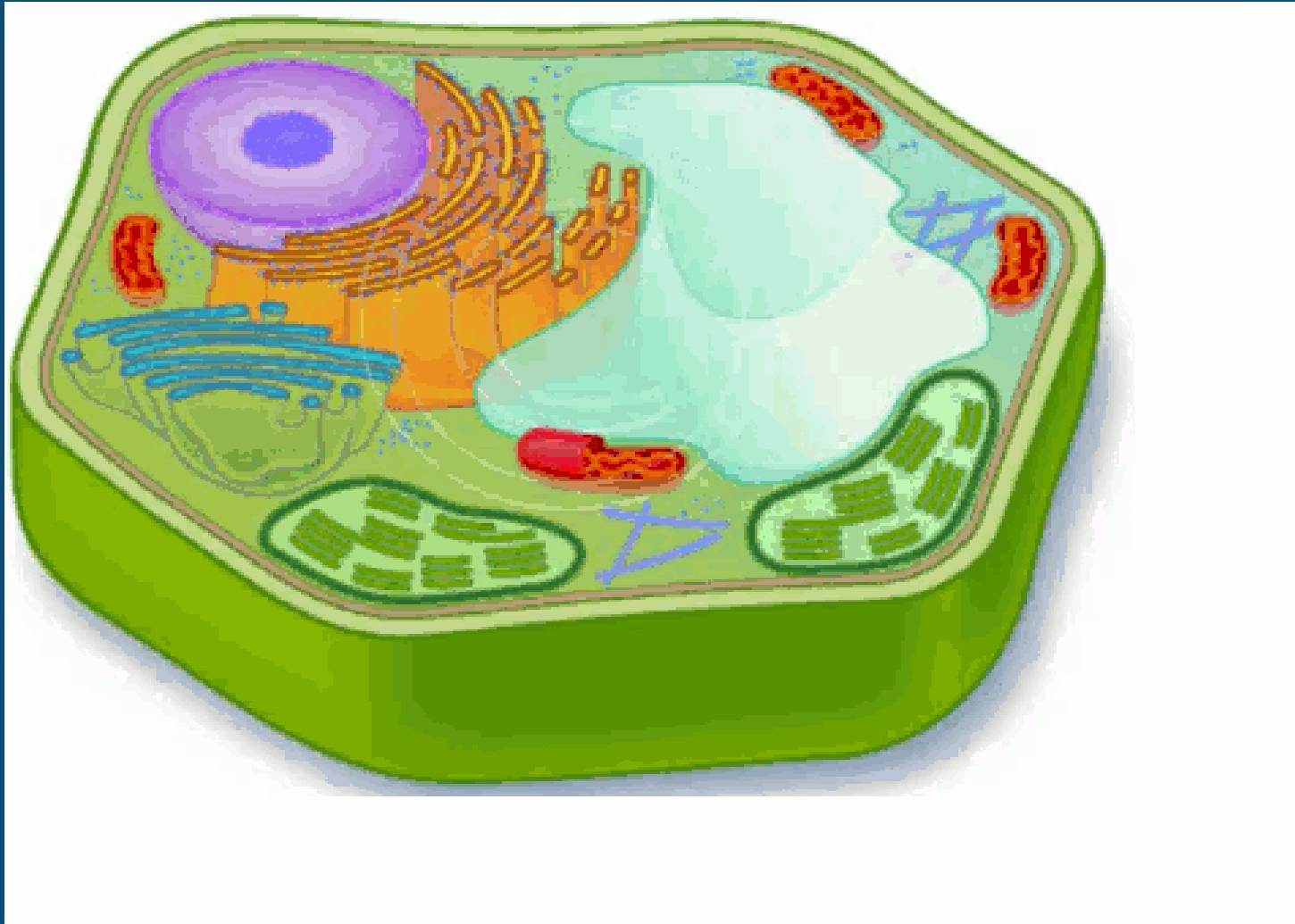


ENDOPLASMIC RETICULUM



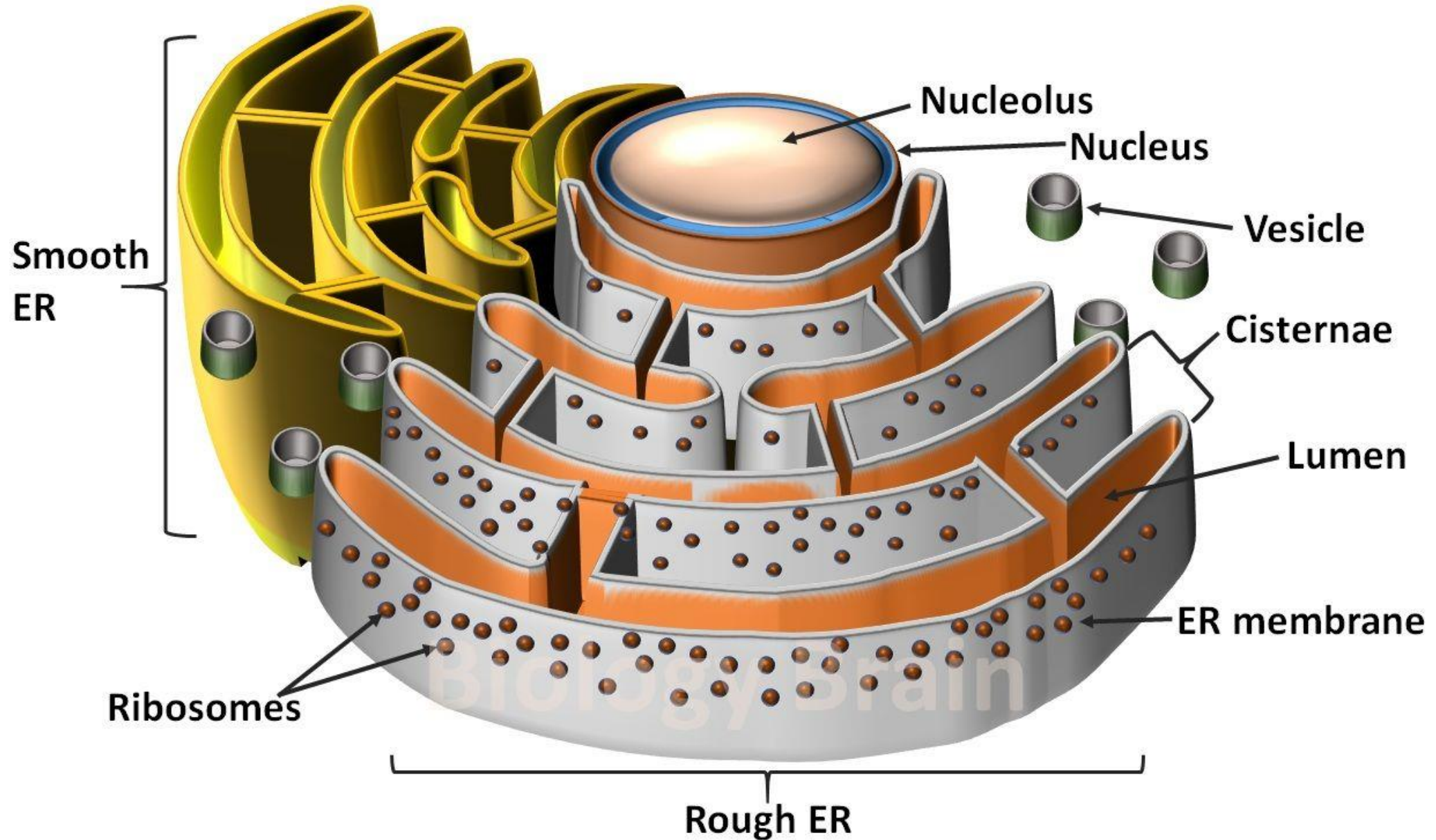
Endoplasmic Reticulum

- ❖ Under an electron microscope a network of channels is seen extending throughout the cytoplasm.
- ❖ These channels are often continuous with plasma membrane and also appear to be in contact with the nuclear membrane. This entire system of channels is the Endoplasmic Reticulum. These membranes vary widely in appearance from cell to cell.
- ❖ The material present in these channels is separated from the cytoplasmic materials by the spherical or tubular membranes, called **cisternae**.

Endoplasmic Reticulum

- ❖ There are two morphological forms of endoplasmic reticulum; a rough form with attached ribosomes and a smooth form without ribosomes. The rough surfaced endoplasmic reticulum (RER) is involved in the synthesis of proteins.
- ❖ After synthesis the proteins are either stored in the cytoplasm or exported out of the cell through these channels.
- ❖ The smooth surfaced endoplasmic reticulum (SER) helps in metabolism of a number of different types of molecules particularly lipids. They also help to detoxify the harmful drugs.
- ❖ In some cells SER is responsible for transmission of impulses, e.g. muscle cells, nerve cells.

Endoplasmic Reticulum



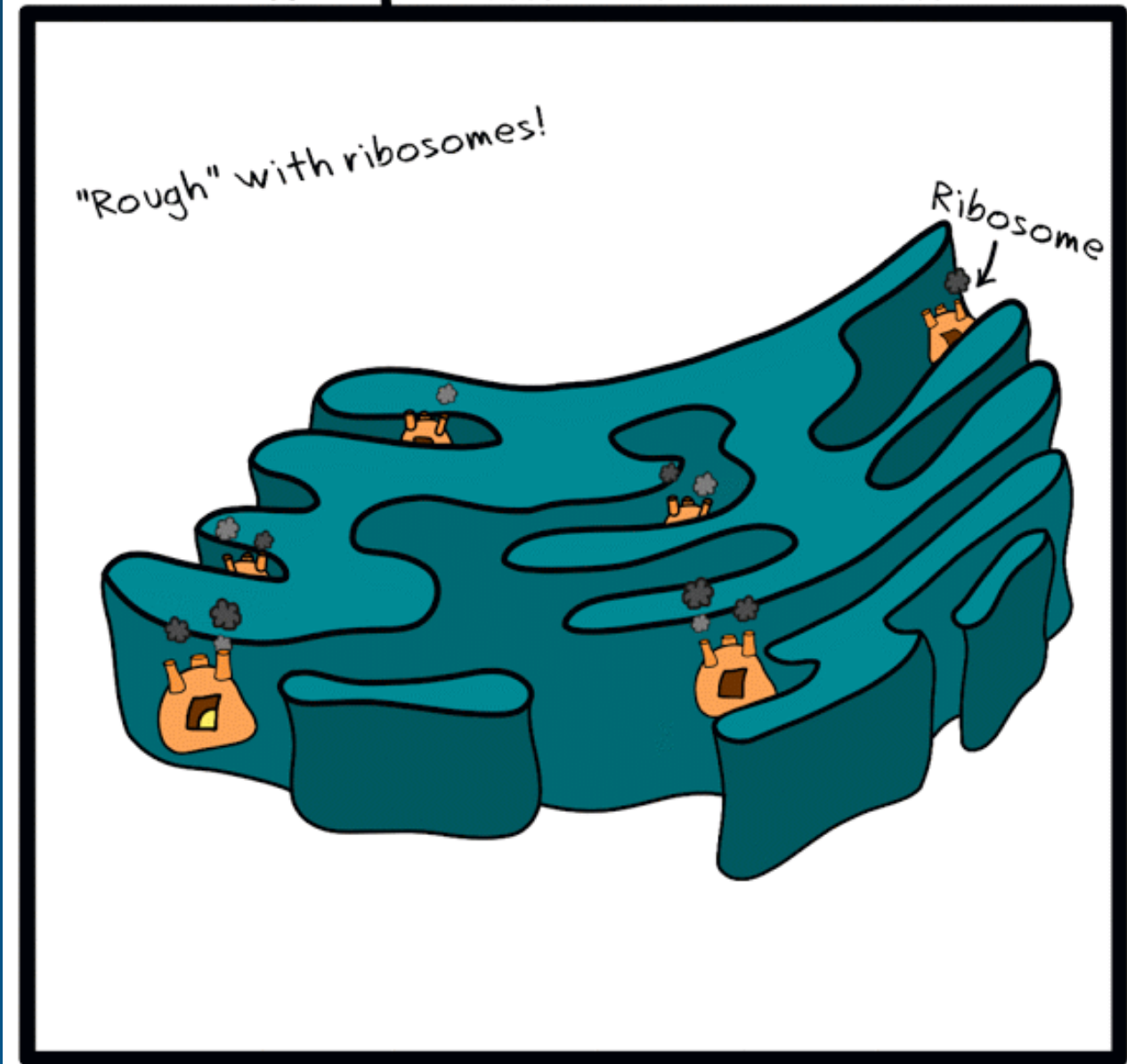
Endoplasmic Reticulum

❖ In addition, SER also plays an important role in the transport of materials from one part of the cell to the other. Endoplasmic reticulum also provides mechanical support to the cell so that its shape is maintained.

Amoeba Sisters

Rough Endoplasmic Reticulum

#AmoebaGIFs



Protein assembly line of the cell

THE END